REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 38, 40, 45, 49, 53-57, 62, and 66-67 have been amended to clarify certain patentable features of the claimed invention, to ensure proper antecedent support for each recited feature, and to correct minor grammatical errors. Support for the amendment to the claims is found, for example, at paragraphs [0040]-[0042] of the published U.S. application. (It should be noted that references herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments). No new matter is entered.

Claims 38-40, 47, 49, 51, 54-57, 59 and 65-67 are rejected under 35 U.S.C. § 102(e) as being anticipated by Zhu et al. (US 7,043,210) (hereinafter, "Zhu"). Claims 42-46, 48, 58, 60-62, 64 and 68 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhu in view of the admitted prior art (hereinafter, "APA"). Claims 50 and 63 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhu in view of Baum et al. (US 6,385,462 B1) (hereinafter, "Baum"). To the extent that these rejections may be deemed applicable to the amended claims presented herein, the Applicants respectfully traverse based on the points set forth below.

By way of review, the Applicants' claim 38 is directed towards a method of determining feedback in a communication system and recites the features of:

"A method of determining feedback in a communication system, the method comprising:

mapping by a transmitting apparatus groups of bits of transmission data comprising data entities of different levels of importance to multi-level modulation symbols, wherein the bits of a respective data entity within each

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group of bits is mapped to a respective hierarchical part of the respective multi-level modulation symbol,

transmitting the multi-level modulation symbols from the transmitting apparatus to a receiving apparatus,

determining at the receiving apparatus for which data entities of the received data feedback should be provided, wherein said determining is based on (1) a decision which data entities are required and which data entities are optional to satisfy a quality of service (QoS) requirement, and (2) the hierarchical parts of the respective multi-level modulation symbols that correspond to data entities required to satisfy the QoS requirement, and

transmitting said feedback for only those data entities for which it has been determined that said feedback should be provided from the receiving apparatus to the transmitting apparatus to thereby satisfy said QoS requirement (emphasis added)."

The method according to claim 38 decreases feedback, resulting in an increase in overall data throughput efficiency. (see published U.S. application, par. [0014]).

As indicated above, claim 38 has been amended to clarify that the feedback is only provided for those selected data entities.

In contrast, Zhu relates to a communication system that communicates packets using a hierarchical coding and modulation scheme where "data is effectively mapped to different layers corresponding to increasing order of quadrature amplitude modulation (QAM)." (col. 5, lines 1-5). For example, in a 16 QAM architecture, 4 bits of the data is mapped into 16 positions of the constellation, as exemplarily illustrated in FIG. 4 of Zhu. (col. 5, lines 5-7). The most significant bits B0 and B1 are modulated using QPSK modulation wherein each of the larger circles shown in FIG. 4 for each of the four quadrants represents one of the four possible symbols of the two most significant bits, B0 and B1. (col. 5, lines 8-12). Similarly, the least significant bits, B2 and B3, are coded and modulated for 16 QAM (col. 5, lines 13-14). The

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individual packets are mapped to the respective bit positions according to their priority, as outlined in further detail throughout col. 5.

As described above, Zhu is related to a multi-level modulation technique.

However, distinct from the method recited by claim 38, in Zhu, all of the packets which are not successfully received will be retransmitted, i.e., there is no selective retransmission triggered by a selective feedback from the receiving apparatus. (see Zhu, Abstract; col. 2, lines 4-5, disclosing that "[t]he transmitter will then retransmit the data that was not properly received"; col. 5., lines 38-43, disclosing that "...the receiver will be able to determine directly or indirectly the data that was received or lost and feed that information back to the transmitter, which will identify the data lost and retransmit the lost data using a desired retransmission scheme").

Therefore, Zhu fails to disclose, either expressly or inherently, the recited operations of "...determining at the receiving apparatus for which data entities of the received data feedback should be provided, wherein said determining is based on (1) a decision which data entities are required and which data entities are optional to satisfy a quality of service (QoS) requirement, and (2) the hierarchical parts of the respective multi-level modulation symbols that correspond to data entities required to satisfy the QoS requirement," and then, "...transmitting said feedback for only those data entities for which it has been determined that said feedback should be provided from the receiving apparatus to the transmitting apparatus to thereby satisfy said QoS requirement," as recited by the Applicants' claim 38. As mentioned above, it is noted that the Applicants' claim 38 has been amended to clarify that the feedback is only provided for those selected data entities. Zhu does not disclose the "determining" operation recited by the

Applicants' claim 38, and further does not disclose the "transmitting" operation recited by the Applicants' claim 38, because in Zhu, all of the packets are transmitted.

Therefore, Zhu fails to disclose, either or expressly or inherently, at least these recited features of the Applicants' claim 38.

Accordingly, it is respectfully submitted that the rejection of claim 38 and all claims dependent therefrom should be withdrawn for at least these reasons.

Independent claims 54 and 56 now similarly recite the above-mentioned subject matter distinguishing claim 38 from Zhu, although claim 54 does so with respect to a receiving apparatus, and claim 56 does so with respect to a transmitting apparatus. Therefore, allowance of claims 38, 54 and 56, and all claims dependent therefrom, is warranted.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

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Respectfully submitted,

/James Edward Ledbetter/

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Date: September 16, 2010                     James E. Ledbetter
JEL/DEA/att                                  Registration No. 28,732

Attorney Docket No. 007725-05104
Dickinson Wright PLLC
1875 Eye Street, NW, Suite 1200
Washington, DC 20006
Telephone: (202) 457-0160
Facsimile: (202) 659-1559